EFFECTIVENESS OF YOGIC INTERVENTION ON THE PHYSIOLOGICAL AND PSYCHOLOGICAL WELL-BEING OF ALCOHOL ADDICTS

A SHORT SYNOPSIS

SUBMITTED BY

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CERTIFICATE

I hereby declare that the synopsis "**Effectiveness Of Yogic Intervention On The Physiological And Psychological Well-Being Of Alcohol Addicts**" being submitted in the partial fulfilment of the requirement for the degree of Doctor of Philosophy in Yogic Science under the Department of Yogic Sciences, Lakshmibai National Institute of Physical Education Gwalior (Pin: 474002) during the academic year 2021-2022.

It is a bona fide record of original work carried out under the supervision of **Dr.Nibu R Krishna** (Associate Professor, LNIPE, Gwalior, M.P.) and co-supervision of **Prof. Suresh Lal Barnwal** (Dean, School of Indology, Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand) and has not been submitted in full or part to any other university or institute for a degree or diploma.

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ABSTRACT

Alcohol addiction remains a critical public health issue globally, with far-reaching effects on physical health, emotional stability, and social well-being. Conventional de-addiction treatments often face challenges such as relapse, lack of holistic support, and inadequate emphasis on the psychosomatic dimension of recovery. In recent years, yogic practices have shown promise as complementary therapies in the treatment of various lifestyle and psychological disorders. This research aims to explore the effectiveness of a structured yogic intervention on the psychological and physiological well-being of individuals recovering from alcohol addiction, particularly those with weak or moderate health.

The intervention comprises beginner-friendly yoga practices—primarily asanas, pranayama, and relaxation techniques—carefully selected from authoritative yoga texts such as *Asana Pranayama Mudra Bandha* (Bihar School of Yoga), *Asanas: Why and How* (Kaivalyadhama), resources from S-VYASA, Morarji Desai National Institute of Yoga and more. The module is designed to be safe, accessible, and appropriate for participants with limited physical stamina and emotional resilience.

A pre-post research design is employed to assess changes across selected psychological parameters and physiological indicators. The expected outcomes include measurable improvements in both domains, reinforcing the therapeutic potential of yoga in addiction recovery.

This study seeks to contribute meaningful insights to the field of yoga therapy and public health, offering a feasible, non-pharmacological approach that supports long-term rehabilitation and relapse prevention. It may further encourage the inclusion of yoga-based modules in institutional de-addiction programs across India and beyond.

Keywords: **Alcohol Addiction, Yoga Intervention, Wellbeing, Yoga, Yoga Psychology**

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CHAPTER-I

INTRODUCTION:

It is often said that to be born as a human is a gift in itself and by the time we become aware of utilizing this gift, we are almost at the end of our journey. It is the same element, "Consciousness" which if trained, holds the power to uplift a person in all dimensions and take his existence to enlightenment, and the same element of consciousness when ignored by handling the control of our instruments of existence, the body, and mind to some external substance or object results in the fall of human consciousness to a level equivalent to animalistic behaviour or sometimes even lower. Out of various such substance abuse one of the most prominent is alcohol. Alcoholism is a broad term used to mean uncontrolled consumption of alcoholic beverages, usually to the detriment of drinker's health, personal relationships and social relationships. It can be described as "alcohol abuse", "alcohol dependence and alcohol dependence syndrome". People addicted to alcoholism are often called "alcoholics" (WHO 2004).

Alcoholism is called a dual disease, since it includes both mental and physical components. Social environment, stress, mental health, family history, age, ethnic group and gender all influence the risk for alcoholism. Long term alcohol abuse produces changes in the brain's structure and leads to alcohol tolerance and physical dependence. These changes make the person with compulsive inability to stop drinking and result in alcohol withdrawal syndrome. Genetic factors play a vital role in the causes of alcoholism. When there is a family history of alcoholism, there is an increased tendency in the upcoming generations (Chartier et al., 2017). Factors such as poverty, unemployment, loss of job leads to alcoholism. People suffering with depression, low self-esteem, stress, anxiety, high self-expectations may turn to alcoholism.

Alcohol is associated with many serious social and developmental issues such as violence, child neglect and absenteeism in the work place. Moreover, it harms the well-being and health of the family members. Thus, the impact of the harmful use of alcohol reaches deep into the society. Furthermore, excessive drinking may lead to physiological disorders to the individual which may harm various organs such as liver, heart, intestines and more. There are believed to be 62.5 million people in India who occasionally drink alcohol. A prospective

study examined 100 cases of alcohol intake. It was found that the most common age group of alcohol intake is between 21-30 years of age (60%) and the urban population is mainly affected (57%).

At its essence, willpower is the ability to resist short-term temptations in order to meet long-term goals, the ability to control one's own actions, emotions, or urges, the control exerted to do something or restrain negative impulses, a strong determination that allows one to do something difficult. Although a lack of willpower doesn't cause someone to develop an addiction, this doesn't mean that willpower is irrelevant in the recovery process. Once the foundation for sobriety has been established, willpower helps a person continue to work towards their recovery goals and resist cravings that can lead to relapse (Hinders, 2021). "People with addiction seem not to be short on willpower; rather, recovery is dependent on developing strategies to preserve willpower by controlling the environment" (Snoek et al., 2016). Excessive drinking of alcohol on regular basis can also lead to high blood pressure issues which can even lead to fatality or multiple organ failure.

Because of such cardinal reasons, it becomes important to address this situation and to provide relevant ideas, concepts and practical methodologies to bring balance to this state of addiction. There are various therapies which are already being applied on functional basis like relapse prevention therapy, group therapy, aversion therapy, cognitive behavioural therapy (CBT), behaviour modification therapy, and few more. On parallel lines, Yoga and its various limbs are being widely applied under the umbrella of Alternative Therapies. Yoga follows a holistic approach and thereby it is important to consider how it gets administered if it is applied as treatment variable in the field of research. Starting from the Sthula Sharira (Gross body), the body needs to be first subjected to few basics practices, which when performed on regular basis can be exposed to intermediate level practices in a combined form of a simple and easy to follow module, consistency and belief in practice then leads to purification and better energy flow through various channels of the body at gross and subtle levels and leads to activation of various subtle energy centres and therefore the effect of yoga therapy is seen on various levels of existence on Sthula and Sukshma components of the body and mind.

Various cleansing techniques, asanas, pranayama, dhyana, dietary and lifestyle modifications, etc. claim to bring enhancement in will power, self-confidence, self-esteem, developing better union or connection with Self and improves behaviour patterns which might be helpful in breaking the chains of alcohol addiction and by doing so, helps in restoring various psychological and physiological aspects of a being towards a healthier version.

RESEARCH QUESTION

To what extent can yogic intervention improve physiological and psychological health in individuals addicted to alcohol?

STATEMENT OF THE PROBLEM

The statement of problem will be stated as “Knowledge gaps regarding the effectiveness of yogic practices in supporting the physiological and psychological recovery of alcohol addicts”

DEFINITION OF IMPORTANT TERMS USED

YOGA PRACTICES

A set of well synchronized and planned efforts on physical, mental, spiritual level which comprises different limbs of yoga such as Prayer, Asana, Pranayama, Shuddhi kriyas, Meditation and certain other aspects performed with a sense of awareness and alertness.

ALCOHOL ADDICTION

A pattern of psycho active substance use that is causing damage to health. The damage may be physical (e.g. hepatitis) or mental (e.g. depressive episodes secondary to heavy alcohol intake). Harmful use commonly, but not invariably, has adverse social consequences; social consequences in themselves, however, are not sufficient to justify a diagnosis of harmful use.

- *WHOs International Classification of Diseases, 10th Revision (The ICD–10 Classification of Mental and Behavioural Disorders) (ICD–10; WHO, 1992)*

AUDIT

The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item screening tool developed by the World Health Organization (WHO) to assess alcohol consumption, drinking behaviours, and alcohol-related problems. A score of 8 or more is considered to indicate hazardous or harmful alcohol use.

SELF EFFICACY

Self-efficacy refers to an individual's belief in their own ability to successfully execute behaviors necessary to produce specific performance attainments. It reflects confidence in the ability to exert control over one's own motivation, behavior, and social environment. High self-efficacy influences the goals individuals choose to pursue, the effort they put forth, and their

resilience in the face of challenges. It plays a crucial role in how one approaches tasks and challenges, with those possessing high self-efficacy being more likely to view difficult tasks as something to be mastered rather than avoided.

HELPLESSNESS

Helplessness is a psychological state characterized by a perceived lack of control over the outcomes of one's actions. Individuals experiencing helplessness believe that their efforts will not influence the situation, leading to a sense of powerlessness and resignation. This often results in decreased motivation, lowered self-esteem, and an increased likelihood of experiencing stress and depression. Helplessness can stem from repeated exposure to uncontrollable events, and it can significantly impact an individual's ability to cope with challenges and pursue goals effectively.

BLOOD PRESSURE

The force of circulating blood on the walls of the arteries. Blood pressure is taken using two measurements: systolic (measured when the heart beats, when blood pressure is at its highest) and diastolic (measured between heart beats, when blood pressure is at its lowest). Blood pressure is written with the systolic blood pressure first, followed by the diastolic blood pressure (for example 120/80). - *NCI's Dictionary of Cancer Terms*

SGPT (Serum Glutamic Pyruvic Transaminase)

Serum glutamic pyruvic transaminase, an enzyme that is normally present in liver and heart cells. SGPT is released into blood when the liver or heart are damaged. The blood SGPT levels are thus elevated with liver damage (for example, from viral hepatitis) or with an insult to the heart (for example, from a heart attack).

SGOT (Serum Glutamic Oxaloacetic Transaminase)

An enzyme found in the liver, heart, and other tissues. A high level of SGOT released into the blood may be a sign of liver or heart damage or other diseases.

OBJECTIVES OF THE STUDY

1. To assess the impact of yogic intervention on the AUDIT scores of individuals with alcohol addiction.
2. To evaluate selected physiological changes resulting from yogic practices in alcohol addicts.
3. To determine selected psychological benefits of yoga for individuals recovering from alcohol addiction.
4. To explore the relationship between yogic practice and psycho-physiological well-being in alcohol addicts.

HYPOTHESES

For objective 1:

Null Hypothesis (H_0**):** Yogic intervention has no significant effect on the AUDIT scores of individuals with alcohol addiction.

For objective 2:

Null Hypothesis (H_0): Yogic practices do not result in significant physiological changes in individuals with alcohol addiction.

For objective 3:

Null Hypothesis (H_0): Yogic intervention does not provide significant psychological benefits for individuals recovering from alcohol addiction.

For objective 4:

Null Hypothesis (H_0): There is no significant relationship between yogic practice and the psycho-physiological well-being of individuals with alcohol addiction.

SIGNIFICANCE OF THE STUDY

1. Mental Health Enhancement and Quality of Life Improvement: Alcohol dependence can lead to various mental disorders affecting daily life, making it crucial to manage this addiction to maintain a high quality of life. This study explores how yogic practices can enhance self-efficacy, helping individuals reduce or quit their dependence on alcohol, thereby improving their overall quality of life.

2. Physiological Health Protection and Improvement: Alcohol addiction can cause severe physiological disorders, leading to critical health issues or even fatality by damaging vital organs. This study aims to demonstrate how yoga practices can protect and improve the health of vital organs such as the heart and liver. By spreading awareness of these benefits, the study

can promote timely intervention and healthier lifestyles among individuals struggling with alcohol addiction.

3. Evidence-Based Strategies for Yoga Therapists: The findings from this study will provide yoga therapists with evidence-based strategies to help alcohol addicts reduce or quit their dependence on alcohol. By understanding the specific physiological and psychological benefits of yoga, therapists can tailor their interventions to be more effective, offering better support to individuals in recovery.

4. Holistic Improvement in Life Satisfaction: Alcohol addiction affects various aspects of a person's life, including relationships, work-life balance, and social behavior, potentially leading to severe issues such as depression, aggression, and marital conflicts. This study will investigate how yoga practices can help individuals reduce or quit alcohol dependence, thereby preventing the escalation of these problems and improving overall life satisfaction for both addicts and their loved ones.

CHAPTER II

REVIEW OF RELATED LITERATURE

Meditation and Prevention of Alcohol Abuse: Shafil et al. (1975) conducted a seminal study on the effects of Transcendental Meditation (TM) on alcohol dependence. The study differentiated between wine and beer drinkers and hard liquor drinkers, involving both male and female participants. Among the combined experimental and control groups, approximately two-thirds were either working professionals or pursuing a degree. The TM group (N=126) and the control group (N=90) were monitored over a period of time. Remarkably, none of the control subjects reported discontinuing beer and wine use. However, 40% of the TM group, who had practiced meditation for over two years, discontinued these beverages within the first six months, with this figure rising to 60% after 25-39 months of meditation. Additionally, 54% of the intervention group, as opposed to only 1% of the control group, ceased consuming hard liquor. These findings suggest that meditation could be an effective preventive tool for alcohol abuse, indicating a significant reduction in alcohol intake among regular meditators over time.

Yoga Intervention on Substance Abuse in Women with PTSD: Reddy et al. (2014) examined the impact of yoga intervention on alcohol and drug abuse risk in veteran and civilian women with post-traumatic stress disorder (PTSD). The study included female participants aged 18 to 65 with at least subthreshold PTSD, as determined by the PTSD Symptom Scale-Interview (PSS-I). Of the 38 participants randomly assigned to the study, 26 completed it, attending 75% or more of the classes. The intervention group exhibited lower scores on the Alcohol Use Disorder Identification Test (AUDIT) in the post-test results after one month. This study suggests that specialized yoga therapy might effectively attenuate PTSD symptoms, potentially reducing the risk of substance abuse in this population.

Mindfulness Meditation in Incarcerated Populations: Bowen et al. (2006) investigated the effectiveness of mindfulness meditation on substance use outcomes within an incarcerated population. The study compared mindfulness meditation with the usual treatment, which included a chemical dependency program and psychoeducational interventions. Results indicated that mindfulness meditation was significantly more effective than the usual treatment in reducing alcohol consumption at a three-month follow-up ($p<0.005$). However, the study did not assess adherence to the therapy, leaving it unclear whether participants correctly followed the principles of mindfulness meditation. Additionally, the level of alcohol dependence among

participants was not clearly defined.

Sudarshan Kriya Yoga (SKY) for Alcohol Dependence: Vedamurthachar et al. (2006) explored the effects of Sudarshan Kriya Yoga (SKY) on inpatients with alcohol dependence. Following a week of detoxification management, consenting subjects (n=60) were equally randomized to receive SKY therapy or to a control group for a two-week study. SKY therapy involved supervised alternate day practice of specific breathing exercises. The Beck Depression Inventory (BDI) scores were measured before and after the two-week intervention, along with morning plasma cortisol, ACTH, and prolactin levels. Both groups showed reductions in BDI scores, but the SKY group exhibited significantly greater reductions. Similarly, plasma cortisol and ACTH levels decreased in both groups but more significantly in the SKY group. The study suggests that the antidepressant effects of SKY in alcohol-dependent subjects may be linked to reductions in stress hormone levels.

Stress, Anxiety and Alcohol Dependence: Fedorova (2014) examined the association between stress and anxiety disorders and alcohol dependence, focusing on the role of self-medication in the development of dual diagnoses. The study found that patients with dual diagnoses were more likely to self-medicate with alcohol than those with alcohol dependence alone ($p=0.046$). Drinking to cope was strongly associated with permanent stressful life events ($p<0.001$) and child maltreatment ($p<0.001$). Most individuals with co-occurring alcohol dependence, anxiety, and stress reported using alcohol to alleviate their mental state, consistent with the use of alcohol for anxiety and stress relief in alcohol-dependent patients.

Yoga and Lifestyle Modification on Blood Pressure: Ramkumar (2015) reported significant decreases in systolic and diastolic blood pressure following 12 weeks of yoga in addition to lifestyle modification compared to lifestyle modification alone. In prehypertensive subjects, the combined yoga and lifestyle modification group showed reductions in blood pressure, heart rate, waist circumference, fasting plasma glucose, and lipids, which are associated with cardiovascular disease prevalence and mortality. The reduction in systolic blood pressure was significantly greater in the combined group compared to the lifestyle modification group. Further research is warranted to validate the use of yoga therapy as an adjunct to standard lifestyle modifications in preventing disease progression.

Alcohol Addiction and Somatic Complications: Paquet (2012) found that alcohol addiction is a leading cause of multiple somatic complications. Alcohol disrupts cellular metabolism and damages vital organs (heart, kidney, lungs, and brain), targeting numerous tissues and affecting glucose regulation, lipid profile, and nutritional deficiencies. These disruptions lead to the aggravation of somatic complications in alcohol users.

Alcoholic Pancreatitis: Grawal (2014) evaluated the frequency of pancreatitis in patients with a history of chronic alcohol abuse through a study of 390 autopsies over 11 years. The study included cross and microscopic assessments of the liver and pancreas, revealing that patients' ages ranged from 22 to 62 years, with a mean age of 45.32 years. The majority of patients had alcohol-related liver disease, with 292 cases of micronodular cirrhosis, 42 cases of chronic pancreatitis, and eight cases of acute hemorrhagic pancreatitis.

The reviewed studies clearly highlight various meditation and yoga interventions as potential tools for preventing and reducing alcohol abuse. Transcendental Meditation, mindfulness meditation, and Sudarshan Kriya Yoga have shown promising results in reducing alcohol consumption and related symptoms. Additionally, yoga interventions have demonstrated benefits in reducing substance abuse risk among women with PTSD and improving physiological markers associated with alcohol dependence. These findings underscore the importance of incorporating holistic and mindfulness-based approaches in substance abuse prevention and treatment programs. Further research is needed to validate these interventions and explore their long-term effects and mechanisms.

CHAPTER III

METHODOLOGY

In this chapter the method and procedure to analyse the effect of yoga practices on AUDIT, psychological and physiological variables of alcohol addicts have been explained.

STUDY DESIGN: Randomized control trial

METHODOLOGY:

The Participants: Alcohol-addicted volunteers (25-40 years) will be randomly selected from various de-addiction centers.

DATA COLLECTION:

Data for the following parameters will be collected at the pre-intervention, mid-intervention, and post-intervention stages. Progressive Yogic Protocol will be administered to the participants 5 days a week for 12 weeks.

Table1: Variables to be measured

Dependent Variables	**Parameters**
Demographic	Age (years)
	Height (cm)
	Body mass (kg)
Physiological	SGPT
	SGOT
Psychological	Self-efficacy
	Helplessness
Alcoholic disorder	

INDEPENDENT VARIABLE: YOGIC INTERVENTION

STATISTICAL TECHNIQUE:

According to the distribution pattern of the data suitable statistical analysis will be used.

EXPECTED OUTCOMES:

The study aims to determine the effectiveness of a structured yogic intervention on the psychological and physiological well-being of individuals recovering from alcohol addiction. It is expected that the intervention will lead to improvements in psychological parameters, and overall well-being, along with positive changes in selected physiological indicators. The findings may highlight the therapeutic relevance of yoga in addiction recovery and support its integration into holistic rehabilitation programs.

REFERENCES

1. Reddy, S., Dick, A. M., Gerber, M. R., & Mitchell, K. (2014). The Effect of a Yoga Intervention on Alcohol and Drug Abuse Risk in Veteran and Civilian Women with Posttraumatic Stress Disorder. Journal of Alternative and Complementary Medicine, 20(10), 750–756. https://doi.org/10.1089/acm.2014.0014
2. Shafil, M., Lavely, R., & Jaffe, R. (1975). Meditation and the prevention of alcohol abuse. The American Journal of Psychiatry, 132(9), 942–945. https://doi.org/10.1176/ajp.132.9.942
3. Bowen, S., Witkiewitz, K., Dillworth, T. M., & Marlatt, G. A. (2007). The role of thought suppression in the relationship between mindfulness meditation and alcohol use. Addictive behaviors, 32(10), 2324–2328. https://doi.org/10.1016/j.addbeh.2007.01.025
4. NCI Dictionary of Cancer terms. National Cancer Institute. (n.d.). Retrieved May 24, 2022, from https://www.cancer.gov/publications/dictionaries/cancer-terms/def/sgot
5. Medical Definition of SGPT. (n.d.). Retrieved May 24, 2022, from https://www.rxlist.com/sgpt/definition.htm
6. How does alcohol affect blood pressure? (2021, September 14). Retrieved May 24, 2022, from https://www.medicalnewstoday.com/articles/alcohol-and-blood-pressure
7. APA dictionary of psychology. (n.d.). APA Dictionary of Psychology. Retrieved May 24, 2022, from https://dictionary.apa.org/Locus of Control
8. Jajoo, Sakshi & Meshram, Ajay. (2021). The Effectiveness of Yoga Asanas in Alcohol De-Addiction. Journal of Pharmaceutical Research International. 446-451. 10.9734/jpri/2021/v33i61A35876.
9. Understanding alcohol use disorders and their treatment. (n.d.). https://www.apa.org. Retrieved May 24, 2022, from https://www.apa.org/topics/substance-use-abuse-addiction/alcohol-disorders
10. Hallgren, M., Romberg, K., Bakshi, A.-S., & Andréasson, S. (2014). Yoga as an adjunct treatment for alcohol dependence: A pilot study. Complementary Therapies in Medicine, 22(3), 441–445. https://doi.org/10.1016/j.ctim.2014.03.003